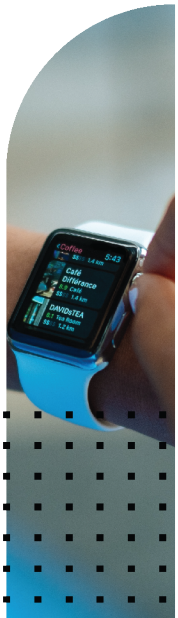
# Release Notes

## FortiOS 7.0.5



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February 9, 2022
FortiOS 7.0.5 Release Notes
01-705-779589-20220209

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# Change Log

| Date | Change Description |
| --- | --- |
| 2022-02-09 | Initial release. |

# Introduction and supported models

This guide provides release information for FortiOS 7.0.5 build 0304.

For FortiOS documentation, see the Fortinet Document Library.

## Supported models

FortiOS 7.0.5 supports the following models.

| | |
|---|---|
| **FortiGate** | FG-40F, FG-40F-3G4G, FG-60E, FG-60E-DSL, FG-60E-DSLJ, FG-60E-POE, FG-60F, FG-61E, FG-61F, FG-80E, FG-80E-POE, FG-80F, FG-80F-BP, FG-80F-POE, FG-81E, FG-81E-POE, FG-81F, FG-81F-POE, FG-90E, FG-91E, FG-100E, FG-100EF, FG-100F, FG-101E, FG-101F, FG-140E, FG-140E-POE, FG-200E, FG-200F, FG-201E, FG-201F, FG-300E, FG-301E, FG-400E, FG-400E-BP, FG-401E, FG-500E, FG-501E, FG-600E, FG-601E, FG-800D, FG-900D, FG-1000D, FG-1100E, FG-1101E, FG-1200D, FG-1500D, FG-1500DT, FG-2000E, FG-2200E, FG-2201E, FG-2500E, FG-3000D, FG-3100D, FG-3200D, FG-3300E, FG-3301E, FG-3400E, FG-3401E, FG-3600E, FG-3601E, FG-3700D, FG-3800D, FG-3960E, FG-3980E, FG-5001E, FG-5001E1 |
| **FortiWiFi** | FWF-40F, FWF-40F-3G4G, FWF-60E, FWF-60E-DSL, FWF-60E-DSLJ, FWF-60F, FWF-61E, FWF-61F, FWF-80F-2R, FWF-81F-2R, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE |
| **FortiGate Rugged** | FGR-60F, FGR-60F-3G4G |
| **FortiGate VM** | FG-VM64, FG-VM64-ALI, FG-VM64-AWS, FG-VM64-AZURE, FG-VM64-GCP, FG-VM64-HV, FG-VM64-IBM, FG-VM64-KVM, FG-VM64-OPC, FG-VM64-RAXONDEMAND, FG-VM64-SVM, FG-VM64-VMX, FG-VM64-XEN |
| **Pay-as-you-go images** | FOS-VM64, FOS-VM64-HV, FOS-VM64-KVM, FOS-VM64-XEN |

# Special notices



## Azure-On-Demand image

Starting from FortiOS 6.4.3, the FG-VM64-AZUREONDEMAND image is no longer provided. Both Azure PAYG and Azure BYOL models will share the same FG-VM64-AZURE image for upgrading and new deployments. Remember to back up your configuration before upgrading.

For ONDEMAND models before 6.4.2, upgrade to 6.4.2 using the FG-VM64-AZUREONDEMAND image. Then, upgrade to a later build using the FG-VM64-AZURE image.

## GCP-On-Demand image

Starting from FortiOS 7.0.0, the FG-VM64-GCPONDEMAND image is no longer provided. Both GCP PAYG and GCP BYOL models will share the same FG-VM64-GCP image for upgrading and new deployments. Remember to back up your configuration before upgrading.

For PAYG models with a 6.2.x build, upgrade to the latest 6.4.x build (6.4.5 or later) using the FG-VM64-GCPONDEMAND image. Then, upgrade to 7.0.x using the FG-VM64-GCP image.

## ALI-On-Demand image

Starting from FortiOS 7.0.0, the FG-VM64-ALIONDEMAND image is no longer provided. Both ALI PAYG and ALI BYOL models will share the same FG-VM64-ALI image for upgrading and new deployments. Remember to back up your configuration before upgrading.

For PAYG models with a 6.2.x build, upgrade to the latest 6.4.x build (6.4.5 or later) using the FGT-VM64-ALIONDEMAND image. Then, upgrade to 7.0.x using the FGT-VM64-ALI image.

# Unsupported websites in SSL VPN web mode

The following websites are not supported in SSL VPN web mode in FortiOS 7.0.1:

- Facebook
- Gmail
- Office 365
- YouTube

# RDP and VNC clipboard toolbox in SSL VPN web mode

Press `F8` to access the RDP/VNC clipboard toolbox. The functionality in previous versions with the clipboard toolbox in the right-hand side of the RDP/VNC page has been removed in FortiOS 7.0.1.

# FEC feature design change

The FEC feature design has the following changes starting in FortiOS 7.0.2:

- FEC enabled on FortiGates running 7.0.2 is not backward compatible with FEC enabled on FortiGates running previous versions.
- In addition to enabling FEC on IPsec interfaces in previous versions, there is a new option, `fec`, that should also be enabled under the related firewall policy so the feature works:

```
config firewall policy
    edit <id>
        set fec enable
    next
end
```

- The `fec` option is not automatically enabled in a firewall policy when upgrading from a previous version. It must be enabled manually.

# Upgrade information

Supported upgrade path information is available on the Fortinet Customer Service & Support site.

**To view supported upgrade path information:**

1. Go to https://support.fortinet.com.
2. From the *Download* menu, select *Firmware Images*.
3. Check that *Select Product* is *FortiGate*.
4. Click the *Upgrade Path* tab and select the following:
   - *Current Product*
   - *Current FortiOS Version*
   - *Upgrade To FortiOS Version*
5. Click *Go*.

## Fortinet Security Fabric upgrade

FortiOS 7.0.5 greatly increases the interoperability between other Fortinet products. This includes:

| | |
|---|---|
| **FortiAnalyzer** | • 7.0.2 |
| **FortiManager** | • 7.0.2 |
| **FortiClient* Microsoft Windows** | • 7.0.0 build 0029 or later |
| **FortiClient* Mac OS X** | • 7.0.0 build 0022 or later |
| **FortiClient* Linux** | • 7.0.0 build 0018 or later |
| **FortiClient* iOS** | • 6.4.6 build 0507 or later |
| **FortiClient* Android** | • 6.4.6 build 0539 or later |
| **FortiClient* EMS** | • 7.0.0 build 0042 or later |
| **FortiAP**<br>**FortiAP-S**<br>**FortiAP-U**<br>**FortiAP-W2** | • See Strong cryptographic cipher requirements for FortiAP on page 11 |
| **FortiSwitch OS (FortiLink support)** | • 6.4.6 build 0470 or later |
| **FortiSandbox** | • 2.3.3 and later, 4.0.0 is recommended |

* If you are using FortiClient only for IPsec VPN or SSL VPN, FortiClient version 6.0 and later are supported.

When upgrading your Security Fabric, devices that manage other devices should be upgraded first. Upgrade the firmware of each device in the following order. This maintains network connectivity without the need to use manual steps.

1. FortiAnalyzer
2. FortiManager
3. FortiGate devices
4. Managed FortiSwitch devices
5. Managed FortiAP devices
6. FortiClient EMS
7. FortiClient
8. FortiSandbox
9. FortiMail
10. FortiWeb
11. FortiADC
12. FortiDDOS
13. FortiWLC
14. FortiNAC
15. FortiVoice
16. FortiDeceptor
17. FortiAI
18. FortiTester
19. FortiMonitor

If Security Fabric is enabled, then all FortiGate devices must be upgraded to 7.0.5. When Security Fabric is enabled in FortiOS 7.0.5, all FortiGate devices must be running FortiOS 7.0.5.

# Downgrading to previous firmware versions

Downgrading to previous firmware versions results in configuration loss on all models. Only the following settings are retained:

- operation mode
- interface IP/management IP
- static route table
- DNS settings
- admin user account
- session helpers
- system access profiles

# Firmware image checksums

The MD5 checksums for all Fortinet software and firmware releases are available at the Customer Service & Support portal, https://support.fortinet.com. After logging in select *Download* > *Firmware Image Checksums*, enter the image file name including the extension, and select *Get Checksum Code*.

# IPsec interface MTU value

IPsec interfaces may calculate a different MTU value after upgrading from 6.4.

This change might cause an OSPF neighbor to not be established after upgrading. The workaround is to set `mtu-ignore` to `enable` on the OSPF interface's configuration:

```
config router ospf
    config ospf-interface
        edit "ipsce-vpnx"
            set mtu-ignore enable
        next
    end
end
```

# HA role wording changes

The term master has changed to primary, and slave has changed to secondary. This change applies to all HA-related CLI commands and output. The one exception is any output related to VRRP, which remains unchanged.

# Strong cryptographic cipher requirements for FortiAP

FortiOS 7.0.0 has removed 3DES and SHA1 from the list of strong cryptographic ciphers. To satisfy the cipher requirement, current FortiAP models whose names end with letter E or F should be upgraded to the following firmware versions:

- FortiAP (F models): version 6.4.3 and later
- FortiAP-S and FortiAP-W2 (E models): version 6.2.4, 6.4.1 and later
- FortiAP-U (EV and F models): version 6.0.3 and later
- FortiAP-C (FAP-C24JE) will support strong ciphers in the future release of version 5.4.3.

If FortiGates running FortiOS 7.0.1 need to manage FortiAP models that cannot be upgraded or legacy FortiAP models whose names end with the letters B, C, CR, or D, administrators can allow those FortiAPs' connections with weak cipher encryption by using compatibility mode:

```
config wireless-controller global
    set tunnel-mode compatible
end
```

# How VoIP profile settings determine the firewall policy inspection mode

When upgrading, all firewall policies with a VoIP profile selected will be converted to proxy-based inspection. All firewall policies that do not have a VoIP profile selected will remain in the same inspection mode after upgrading.

# L2TP over IPsec configuration needs to be manually updated after upgrading from 6.4.x or 7.0.0 to 7.0.1

**To make L2TP over IPsec work after upgrading:**

1. Add a static route for the IP range configured in `vpn l2tp`. For example, if the L2TP setting in the previous version's root VDOM is:

```
config vpn l2tp
    set eip 210.0.0.254
    set sip 210.0.0.1
    set status enable
    set usrgrp "L2tpusergroup"
end
```

   Add a static route after upgrading:

```
config router static
    edit 1
        set dst 210.0.0.0 255.255.255.0
        set device "l2tp.root"
    next
end
```

2. Change the firewall policy source interface tunnel name to `l2t.VDOM`.

# Add interface for NAT46 and NAT64 to simplify policy and routing configurations

This update simplifies the policy and routing of NAT46 and NAT64 policies by adding the NAT tunnel interface and options in `firewall vip/vip6` and `firewall policy` settings. The `policy46` and `policy64` settings have been merged into `policy`, and `vip46` and `vip64` into `vip` and `vip6`. Most firewall policy options can now be used in policies with NAT46 and NAT64 options enabled.

## Upgrading

When upgrading from FortiOS 6.4.x or 7.0.0 to 7.0.1, the old configurations for `vip46`, `vip64`, `policy46`, `policy64`, `nat64`, and `gui-nat46-64` will be removed. All objects in them will be removed.

The following CLI commands have been removed:

- `config firewall vip46`
- `config firewall vip64`
- `config firewall policy46`
- `config firewall policy64`
- `config system nat64`
- `set gui-nat46-64 {enable | disable}` (under `config system settings`)

The following GUI pages have been removed:

- *Policy & Objects* > *NAT46 Policy*
- *Policy & Objects* > *NAT64 Policy*
- NAT46 and NAT64 VIP category options on *Policy & Objects* > *Virtual IPs* related pages

## Creating new policies

After upgrading FortiOS 6.4.x or 7.0.0 to 7.0.1, you will need to manually create new `vip46` and `vip64` policies.

- Create a `vip46` from `config firewall vip` and enable the `nat46` option.
- Create a `vip64` from `config firewall vip6` and enable the `nat64` option.
- Create or modify `ippool` and `ippool6`, and enable the `nat64` or `nat46` option.
- Create a policy and enable the `nat46` option, apply the `vip46` and `ippool6` in a policy.
- Create a policy and enable the `nat64` option, apply the `vip64` and `ippool` in policy.
- Ensure the routing on the client and server matches the new `vip`/`vip6` and `ippool`/`ippool6`.

## Example configurations

`vip46` object:

| Old configuration | New configuration |
|---|---|
| `config firewall vip46`<br>`edit "test-vip46-1"`<br>`set extip 10.1.100.155`<br>`set mappedip 2000:172:16:200::55`<br>`next`<br>`end` | `config firewall vip`<br>`edit "test-vip46-1"`<br>`set extip 10.1.100.150`<br>`set nat44 disable`<br>**`set nat46 enable`**<br>`set extintf "port24"`<br>**`set ipv6-mappedip 2000:172:16:200::55`**<br>`next`<br>`end` |

`ippool6` object:

| Old configuration | New configuration |
|---|---|
| config firewall ippool6<br>edit "test-ippool6-1"<br>set startip 2000:172:16:201::155<br>set endip 2000:172:16:201::155<br>next<br>end | config firewall ippool6<br>edit "test-ippool6-1"<br>set startip 2000:172:16:201::155<br>set endip 2000:172:16:201::155<br>**set nat46 enable**<br>next<br>end |

NAT46 policy:

| Old configuration | New configuration |
|---|---|
| config firewall policy46<br>edit 1<br>set srcintf "port24"<br>set dstintf "port17"<br>set srcaddr "all"<br>set dstaddr "test-vip46-1"<br>set action accept<br>set schedule "always"<br>set service "ALL"<br>set logtraffic enable<br>set ippool enable<br>set poolname "test-ippool6-1"<br>next<br>end | config firewall policy<br>edit 2<br>set srcintf "port24"<br>set dstintf "port17"<br>set action accept<br>**set nat46 enable**<br>set srcaddr "all"<br>set dstaddr "test-vip46-1"<br>set srcaddr6 "all"<br>set dstaddr6 "all"<br>set schedule "always"<br>set service "ALL"<br>set logtraffic all<br>set ippool enable<br>set poolname6 "test-ippool6-1"<br>next<br>end |

`vip64` object

| Old configuration | New configuration |
|---|---|
| config firewall vip64<br>edit "test-vip64-1"<br>set extip 2000:10:1:100::155<br>set mappedip 172.16.200.155<br>next<br>end | config firewall vip6<br>edit "test-vip64-1"<br>set extip 2000:10:1:100::155<br>set nat66 disable<br>**set nat64 enable**<br>**set ipv4-mappedip 172.16.200.155**<br>next<br>end |

`ippool` object

| Old configuration | New configuration |
|---|---|
| config firewall ippool<br>edit "test-ippool4-1" | config firewall ippool<br>edit "test-ippool4-1" |

| Old configuration | New configuration |
|---|---|
| `set startip 172.16.201.155`<br>`set endip 172.16.201.155`<br>`next`<br>`end` | `set startip 172.16.201.155`<br>`set endip 172.16.201.155`<br>**`set nat64 enable`**<br>`next`<br>`end` |

NAT64 policy:

| Old configuration | New configuration |
|---|---|
| `config firewall policy64`<br>`edit 1`<br>`set srcintf "wan2"`<br>`set dstintf "wan1"`<br>`set srcaddr "all"`<br>`set dstaddr "test-vip64-1"`<br>`set action accept`<br>`set schedule "always"`<br>`set service "ALL"`<br>`set ippool enable`<br>`set poolname "test-ippool4-1"`<br>`next`<br>`end` | `config firewall policy`<br>`edit 1`<br>`set srcintf "port24"`<br>`set dstintf "port17"`<br>`set action accept`<br>**`set nat64 enable`**<br>`set srcaddr "all"`<br>`set dstaddr "all"`<br>`set srcaddr6 "all"`<br>`set dstaddr6 "test-vip64-1"`<br>`set schedule "always"`<br>`set service "ALL"`<br>`set logtraffic all`<br>`set ippool enable`<br>`set poolname "test-ippool4-1"`<br>`next`<br>`end` |

# ZTNA configurations and firewall policies

Since FortiOS 7.0.2, ZTNA configurations no longer require a firewall policy to forward traffic to the access proxy VIP. This is implicitly generated based on the ZTNA rule configuration.

When upgrading from FortiOS 7.0.1 or below:

- If an `access-proxy` type `proxy-policy` does not have a `srcintf`, then after upgrading it will be set to `any`.
- To display the `srcintf` as *any* in the GUI, *System* > *Feature Visibility* should have *Multiple Interface Policies* enabled.
- All full ZTNA firewall policies will be automatically removed.

# Default DNS server update

If both primary and secondary DNS servers are set to use the default FortiGuard servers prior to upgrading, the FortiGate will update them to the new servers and enable DoT after upgrading. If one or both DNS servers are not using

the default FortiGuard server, upgrading will retain the existing DNS servers and DNS protocol configuration.

# Product integration and support

The following table lists FortiOS 7.0.5 product integration and support information:

| | |
|---|---|
| **Web browsers** | • Microsoft Edge 94<br>• Mozilla Firefox version 96<br>• Google Chrome version 97<br>Other web browsers may function correctly, but are not supported by Fortinet. |
| **Explicit web proxy browser** | • Microsoft Edge 44<br>• Mozilla Firefox version 74<br>• Google Chrome version 80<br>Other web browsers may function correctly, but are not supported by Fortinet. |
| **FortiController** | • 5.2.5 and later<br>Supported models: FCTL-5103B, FCTL-5903C, FCTL-5913C |
| **Fortinet Single Sign-On (FSSO)** | • 5.0 build 0304 and later (needed for FSSO agent support OU in group filters)<br>  • Windows Server 2019 Standard<br>  • Windows Server 2019 Datacenter<br>  • Windows Server 2019 Core<br>  • Windows Server 2016 Datacenter<br>  • Windows Server 2016 Standard<br>  • Windows Server 2016 Core<br>  • Windows Server 2012 Standard<br>  • Windows Server 2012 R2 Standard<br>  • Windows Server 2012 Core<br>  • Windows Server 2008 64-bit (requires Microsoft SHA2 support package)<br>  • Windows Server 2008 R2 64-bit (requires Microsoft SHA2 support package)<br>  • Windows Server 2008 Core (requires Microsoft SHA2 support package)<br>  • Novell eDirectory 8.8 |
| **FortiExtender** | • 4.0.0 and later, 7.0.3 is recommended |
| **AV Engine** | • 6.00270 |
| **IPS Engine** | • 7.00105 |

## Virtualization environments

The following table lists hypervisors and recommended versions.

| Hypervisor | Recommended versions |
|---|---|
| **Citrix Hypervisor** | • 8.1 Express Edition, Dec 17, 2019 |
| **Linux KVM** | • Ubuntu 18.0.4 LTS<br>• Red Hat Enterprise Linux release 8.4<br>• SUSE Linux Enterprise Server 12 SP3 release 12.3 |
| **Microsoft Windows Server** | • 2012R2 with Hyper-V role |
| **Windows Hyper-V Server** | • 2019 |
| **Open source XenServer** | • Version 3.4.3<br>• Version 4.1 and later |
| **VMware ESX** | • Versions 4.0 and 4.1 |
| **VMware ESXi** | • Versions 4.0, 4.1, 5.0, 5.1, 5.5, 6.0, 6.5, 6.7, and 7.0. |

# Language support

The following table lists language support information.

**Language support**

| Language | GUI |
|---|---|
| English | ✓ |
| Chinese (Simplified) | ✓ |
| Chinese (Traditional) | ✓ |
| French | ✓ |
| Japanese | ✓ |
| Korean | ✓ |
| Portuguese (Brazil) | ✓ |
| Spanish | ✓ |

# SSL VPN support

## SSL VPN web mode

The following table lists the operating systems and web browsers supported by SSL VPN web mode.

**Supported operating systems and web browsers**

| Operating System | Web Browser |
|---|---|
| Microsoft Windows 7 SP1 (32-bit & 64-bit) | Mozilla Firefox version 96<br>Google Chrome version 97 |
| Microsoft Windows 10 (64-bit) | Microsoft Edge<br>Mozilla Firefox version 96<br>Google Chrome version 97 |
| Ubuntu 20.04 (64-bit) | Mozilla Firefox version 96<br>Google Chrome version 97 |
| macOS Monterey 12.0 | Apple Safari version 15<br>Mozilla Firefox version 96<br>Google Chrome version 97 |
| iOS | Apple Safari<br>Mozilla Firefox<br>Google Chrome |
| Android | Mozilla Firefox<br>Google Chrome |

Other operating systems and web browsers may function correctly, but are not supported by Fortinet.

# Resolved issues

The following issues have been fixed in version 7.0.5. For inquires about a particular bug, please contact Customer Service & Support.

## Anti Virus

| Bug ID | Description |
|---|---|
| 778298 | Traffic is blocked when an AV profiled is enabled in proxy inspection mode in an IPsec scenario with NPU offloading enabled. |

## Proxy

| Bug ID | Description |
|---|---|
| 772041 | WAD crash at signal 11. |
| 778659 | Proxy inspection fails due to `ipsapp session open failed: all providers busy`. |

## System

| Bug ID | Description |
|---|---|
| 778474 | dhcpd is not processing discover messages if they contain a 0 length option, such as 80 (rapid commit). The warning, `length 0 overflows input buffer`, is displayed. |

# Known issues

The following issues have been identified in version 7.0.5. For inquires about a particular bug or to report a bug, please contact Customer Service & Support.

## Endpoint Control

| Bug ID | Description |
|---|---|
| 708545 | The WAD daemon is triggered to fetch the FortiClient information based on a ZTNA EMS tag enabled for checking in a proxy policy. It is then possible to get a ZTNA EMS tag in the firewall dynamic address and get the expected traffic control. |
| 730767 | The new HA primary FortiGate cannot get EMS Cloud information when HA switches over.<br>**Workaround**: delete the EMS Cloud entry then add it back. |

## Firewall

| Bug ID | Description |
|---|---|
| 719311 | FortiGate shows partial view of policies after upgrading. |

## GUI

| Bug ID | Description |
|---|---|
| 440197 | On the *System* > *FortiGuard* page, the override FortiGuard server for *AntiVirus & IPS Updates* shows an *Unknown* status, even if the server is working correctly. This is a display issue only; the override feature is working properly. |
| 677806 | On the *Network* > *Interfaces* page when VDOM mode is enabled, the *Global* view incorrectly shows the status of IPsec tunnel interfaces from non-management VDOMs as up. The VDOM view shows the correct status. |
| 685431 | On the *Policy & Objects* > *Firewall Policy* page, the policy list can take around 30 seconds or more to load when there is a large number (over 20 thousand) of policies.<br>**Workaround**: use the CLI to configure policies. |

| Bug ID | Description |
|---|---|
| 707589 | *System* > *Certificates* list sometimes shows an incorrect reference count for a certificate, and incorrectly allows a user to delete a referenced certificate. The deletion will fail even though a success message is shown. Users should be able to delete the certificate after all references are removed. |
| 708005 | When using the SSL VPN web portal in the Firefox, users cannot paste text into the SSH terminal emulator.<br>**Workaround**: use Chrome, Edge, or Safari as the browser. |
| 713529 | When FortiAnalyzer is configured, the HTTPS daemon may crash while processing some FortiAnalyzer log requests. There is no apparent impact on the GUI operation. |
| 755177 | When upgrade firmware from 7.0.1 to 7.0.2, the GUI incorrectly displays a warning saying this is not a valid upgrade path. |

## HA

| Bug ID | Description |
|---|---|
| 662978 | Long lasting sessions are expired on HA secondary device with a 10G interface. |
| 771389 | SNMP community name with one extra character at the end stills matches when HA is enabled. |

## IPsec VPN

| Bug ID | Description |
|---|---|
| 699973 | IPsec aggregate shows down status on *Interfaces*, *Firewall Policy*, and *Static Routes* configuration pages. |

## Proxy

| Bug ID | Description |
|---|---|
| 692444 | WAD memory leak is caused by missing a close event. The WAD receives a close event from TCP when the SSL port is blocked by the up application layer. If the SSL port input buffer does not have any data, then the close event will get ignored even if the application layer turns off blocking and the SSL port will leak. |

## Routing

| Bug ID | Description |
|---|---|
| 745856 | The default SD-WAN route for the LTE wwan interface is not created.<br>**Workaround**: add a random gateway to the wwan member.<br>`config system sdwan`<br>`config members`<br>`edit 2`<br>`set interface "wwan"`<br>`set gateway 10.198.58.58`<br>`set priority 100`<br>`next`<br>`end`<br>`end` |

## Security Fabric

| Bug ID | Description |
|---|---|
| 614691 | Slow GUI performance in large Fabric topology with over 50 downstream devices. |

## SSL VPN

| Bug ID | Description |
|---|---|
| 757450 | SNAT is not working in SSL VPN web mode when accessing an SFTP server. |

## System

| Bug ID | Description |
|---|---|
| 644782 | A large number of detected devices causes httpsd to consume resources, and causes low-end devices to enter conserve mode. |
| 681322 | TCP 8008 permitted by authd, even though the service in the policy does not include that port. |
| 699152 | QinQ (802.1ad) support needed on the following models: FG-1100E, FG-1101E, FG-2200E, FG-2201E, FG-3300E, FG-3301E, FG-3600E, and FG-3601E. |
| 764252 | On FG-100F, no event is raised for PSU failure and the diagnostic command is not available. |

## VM

| Bug ID | Description |
|---|---|
| 689047 | ARM64-KVM has kernel panic. |

## WAN Optimization

| Bug ID | Description |
|---|---|
| 728861 | HTTP/HTTPS traffic cannot go through when `wanopt` is set to manual mode and an external proxy is used.<br>**Workaround**: set `wanopt` to automatic mode, or `set transparent disable` in the `wanopt profile`. |

## WiFi Controller

| Bug ID | Description |
|---|---|
| 630085 | A cw_acd crash is observed on the FortiGate when the FortiAP is deleted from the managed AP list. |
| 750425 | In RADIUS MAC authentication, the FortiGate NAS-IP-Address will revert to `0.0.0.0` after using the FortiGate address. |
| 757189 | A batch of APs in cluster are exhibiting control messages that the maximal retransmission limit reached, and the APs disconnect from the FortiGate. |
| 775157 | A packet with the wrong IP header could not be processed by the CAPWAP driver, which randomly causes the FortiGate to reboot. |

# Limitations

## Citrix XenServer limitations

The following limitations apply to Citrix XenServer installations:

- XenTools installation is not supported.
- FortiGate-VM can be imported or deployed in only the following three formats:
  - XVA (recommended)
  - VHD
  - OVF
- The XVA format comes pre-configured with default configurations for VM name, virtual CPU, memory, and virtual NIC. Other formats will require manual configuration before the first power on process.

## Open source XenServer limitations

When using Linux Ubuntu version 11.10, XenServer version 4.1.0, and libvir version 0.9.2, importing issues may arise when using the QCOW2 format and existing HDA issues.

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